查询SMV1129供应商

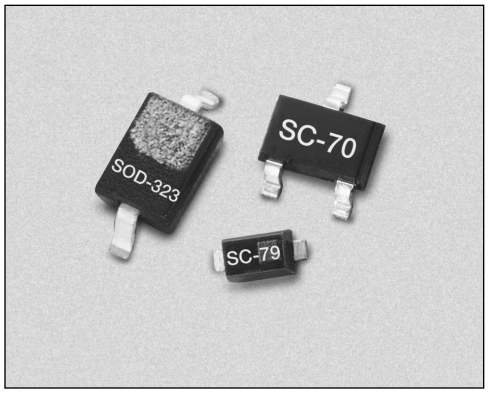
Hyperabrupt Junction Tuning Varactors

Alpha

SMV1129 and SMV1139

Features

- High Q
- Low Series Resistance for Low Phase Noise
- Multiple Packages SOD-323, SC-79 and SC-70
- Designed for High Volume Commercial Applications
- SPICE Models are Available



Description

The SMV1129 and SMV1139 silicon hyperabrupt junction varactor diodes are designed for use in VCOs requiring low resistance. The low resistance of these varactors makes them appropriate for high Q resonators in wireless system VCOs to frequencies beyond 2.5 GHz.

Absolute Maximum Ratings

Characteristic	Value
Forward Current (I_F)	20 mA
Power Dissipation (P_D)	250 mW
Storage Temperature (T_{ST})	-55°C to +150°C
Operating Temperature (T_{OP})	-55°C to +125°C

Single	Single	Common Anode
SOD-323	SC-79	SC-70
♦ **SMV1129-011**	♦ **SMV1129-079**	**SMV1129-073**
♦ **SMV1139-011**	♦ **SMV1139-079**	
L_S = 1.5 nH	L_S = 0.7 nH	L_S = 1.4 nH

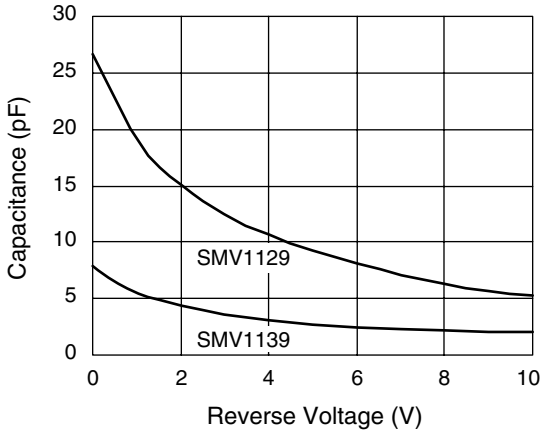
♦ Available through distribution.
For other packages or configurations, please contact the factory.

Electrical Specifications at 25°C

Part Number	C_T @ 1 V (pF)			$\frac{C_T \text{ @ } 1\text{ V}}{C_T \text{ @ } 3\text{ V}}$ (Ratio)		$\frac{C_T \text{ @ } 1\text{ V}}{C_T \text{ @ } 6\text{ V}}$ (Ratio)		R_S @ 1 V 500 MHz (Ω)
	Min.	Typ.	Max.	Min.	Typ.	Min.	Typ.	Max.
SMV1129	17.50	19.0	20.50	1.4	1.53	2.0	2.5	0.4
SMV1139	4.95	5.4	5.85	1.4	1.53	2.0	2.5	0.6

Reverse Voltage V_R (I_R = 10 μA): 12 V
Reverse Current I_R (V_R = 10 V): 20 nA

Typical Performance Data

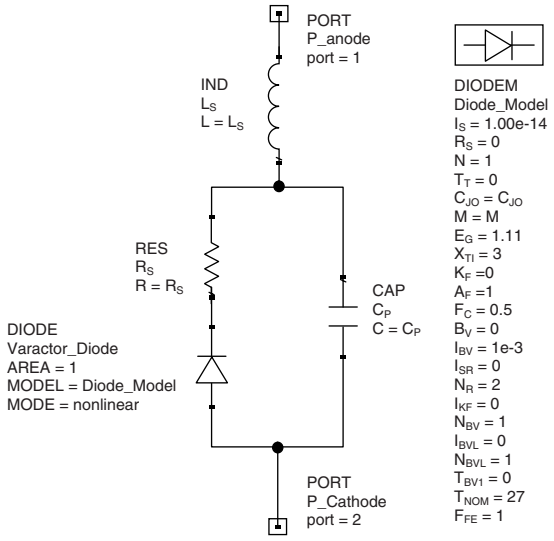


Capacitance vs. Reverse Voltage

Capacitance vs. Reverse Voltage

	SMV1129	SMV1139
V_R (V)	C_T (pF)	C_T (pF)
0	27.5	8.0
1	18.9	5.5
2	15.0	4.4
3	12.5	3.7
4	10.7	3.1
5	9.3	2.7
6	8.1	2.5
7	7.1	2.3
8	6.3	2.2
9	5.7	2.1
10	5.2	2.0
11	4.9	2.0
12	4.7	1.9

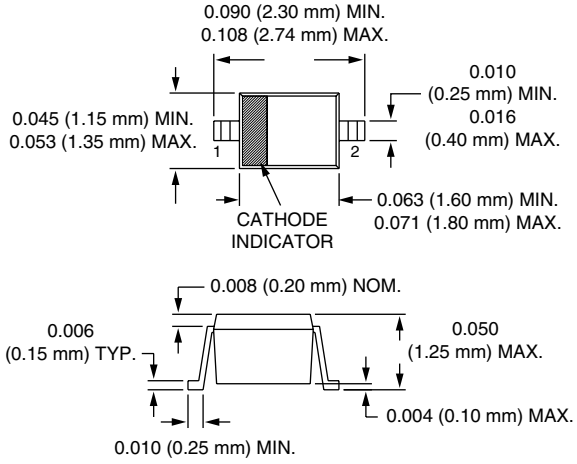
SPICE Model



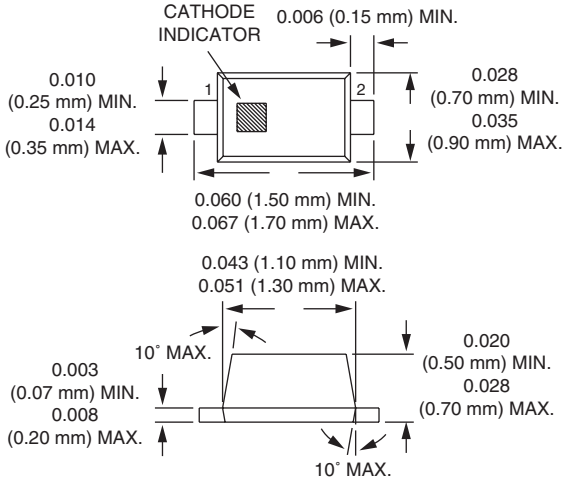
Part Number	C_{JO} (pF)	V_J (V)	M	C_P (pF)	R_S (Ω)
SMV1129	27.5	2.8	1.10	0	0.40
SMV1139	8.0	1.2	0.65	0	0.60

1. Values extracted from measured performance.
2. For package inductance (L_S) refer to package type.
3. For more details refer to the "Varactor SPICE Models for RF VCO Applications" Application Note.

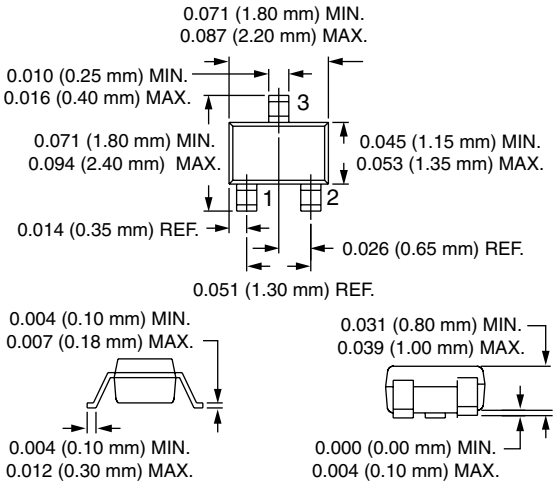
SOD-323



SC-79



SC-70


0.071 (1.80 mm) MIN.
0.087 (2.20 mm) MAX.
0.010 (0.25 mm) MIN.
0.016 (0.40 mm) MAX.
3
0.071 (1.80 mm) MIN.
0.094 (2.40 mm) MAX.
0.045 (1.15 mm) MIN.
0.053 (1.35 mm) MAX.
1
2
0.014 (0.35 mm) REF.
0.026 (0.65 mm) REF.
0.051 (1.30 mm) REF.
0.004 (0.10 mm) MIN.
0.007 (0.18 mm) MAX.
0.004 (0.10 mm) MIN.
0.012 (0.30 mm) MAX.
0.031 (0.80 mm) MIN.
0.039 (1.00 mm) MAX.
0.000 (0.00 mm) MIN.
0.004 (0.10 mm) MAX.